

GREEN RIVER FLOOD CONTROL ZONE DISTRICT

2004 Annual Report

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INTRODUCTION AND BACKGROUND

The purpose of this annual report is to provide an accounting of 2004 Green River Flood Control Zone District's (District) revenue, expenditures and work program accomplishments. An annual reporting of District's activities is required per Section 4.3.3 of the *Interlocal Agreement for the Administration of the Green River Flood Control Zone District* enacted November 15, 2002 by King County and the Green River Valley cities of Auburn, Kent, Renton and Tukwila for a ten-year duration. This report also provides a summary of the annual maintenance and repair activities performed on the District's flood protection facilities in 2004.

The primary goals and objectives of the District's Interlocal Agreement are for the:

1. interagency coordination and cooperation among the parties on flood hazard reduction planning, programs and projects within the District;
2. integration of policy and technical advisory input to the Green River Flood Control Zone District through the Executive and Technical Committees;
3. development and implementation of contemporary standards and procedures for operating, maintaining and repairing river flood protection facilities and pump stations within the District to maximize public health and safety; consistent with the requirements of the federal Endangered Species Act and other applicable federal, state and local laws and regulations; and
4. efficient and effective implementation of flood hazard reduction measures and programs in the Green River Flood Control Zone District.

In 1978, King County and the Green River Valley cities signed an interlocal agreement to form the Green River Basin Program, which supported a more comprehensive and programmatic interjurisdictional flood control and drainage program for the lower Green River Basin. In 1985 and 1992, the Green River Basin Program interlocal agreement was extended with concurrence from King County and the cities of Auburn, Kent, Renton and Tukwila to further support each jurisdiction's shared interest for coordinating flood hazard planning and implementation. In 2002, the interlocal agreement was renewed for a ten-year period and built on the principles embodied in the 1978, 1985 and 1992 interlocal agreements.

Prior to 1990, the Green River Basin Program was funded by a cost-share arrangement between King County and the Green River cities. Since the activation of the District in 1990, activities are funded by an ad valorem tax levy on all taxable properties within its boundaries.

GREEN RIVER FLOOD CONTROL ZONE DISTRICT

The Green River Flood Control Zone District was formed in 1960 by Resolution 31192 of the King County Board of Commissioners with concurrence from the affected lower Green River valley cities. The District was activated in December 1990 and initiated collection of taxes in 1991. The purpose of the District is to provide a funding base for operation and maintenance of levees, revetments and pump stations on the Green River within the District's boundaries, and to fund administration of the Green River Flood Control Zone District's work program.

The District encompasses areas within seven cities, portions of unincorporated King County, five Metropolitan King County Council Districts, four State legislative districts, and three Congressional districts. It approximates the drainage basin of the lower Green River Valley, contains 44,000 acres among some 45,000 parcels, and had a total assessed valuation in 2004 of \$18.8 billion. A map of the District is shown on page 5 of this report.

In accordance with state law regarding special purpose districts, the Green River Flood Control Zone District is a quasi-municipal corporation legally separate from King County and an independent taxing authority of the State of Washington authorized by Chapter 86.15 of the Revised Code of Washington. However, the District's Board of Supervisors, by Washington State statute, is composed of the King County Council, who are explicitly responsible for the governance of the District.

Flood Summary for Water Years 2003-2004 (10/01/03 through 08/01/05)

Since the beginning of the 2004 Water Year on October 1, 2003 the Green River has not been subject to any significant flood events, largely due to the lack of precipitation and rain-on-snow events which are characteristically the cause of major flood events. This drier trend has continued in recent years. Flood events are also held in check because flows on the lower Green River are a direct function of the U.S. Army Corps of Engineers' (USACE) operations of the Howard Hanson dam and reservoir. The majority of flow in the Green River is contributed from the upper watershed as a controlled release from the reservoir.

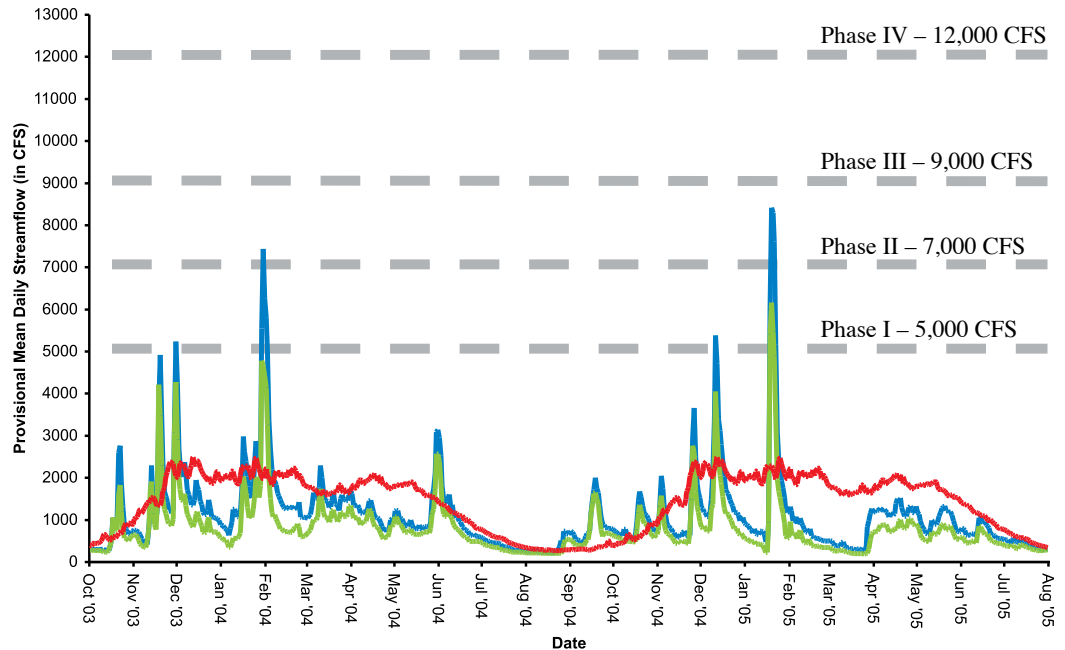
During a normal flood season, the Green River will experience an average of two to three minor flood events per season, with more significant Phase III flood event on average occurring once every two to three years. Between October 2003 and August 2005, flood events on the Green River have been relatively typical.

As indicated in the mean hourly flow graph on the following page, since the beginning of the 2004 water year as measured at the Auburn gauge the Green River exceeded the Phase I flood thresholds of 5,000 cubic feet per second (CFS) five times and of these five events, two exceeded Phase II flood thresholds of 7,000 CFS. The first of two Phase II events on the Green River occurred during a period between January 29–February 3, 2004 when the Auburn gauge measured flows between 3,370 and 7,740 CFS with the maximum flow occurring on January 30. The second Phase II event occurred during a period between January 18–February 3, 2005 when the Auburn gauge measured flows between 3,090 and 8,420 with the maximum flow occurring on January 19.



MEAN HOURLY STREAMFLOW RATES FOR WATER YEARS 2004-2005

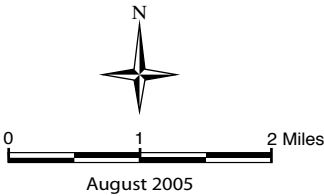
Howard Hansen Dam and Auburn Gages October 1, 2003 – July 31, 2005



- **Green River Near Auburn** (USGS #12113000): At river mile 32.0, 1.8 miles downstream from Big Soos Creek. Drainage area is approximately 399 square miles.
- **Green River Below Howard Hanson Dam** (USGS #12105900): Located 0.7 miles downstream from Howard Hanson Dam with a contributing drainage area of approximately 221 square miles. Flows at this site as a result are regulated by the operations of Howard Hanson Dam.
- **Historical Mean of Daily Mean Value Near Auburn:** This is the historical mean of daily mean value at the Green River Near Auburn gage based on 68 years of records since August 1936.

Streamflow: Also referred to as discharge, streamflow is the volume of water flowing past a given point in the stream in a given period of time. Streamflow is reported as cubic feet per second.

Map 1 GREEN RIVER FLOOD CONTROL ZONE DISTRICT



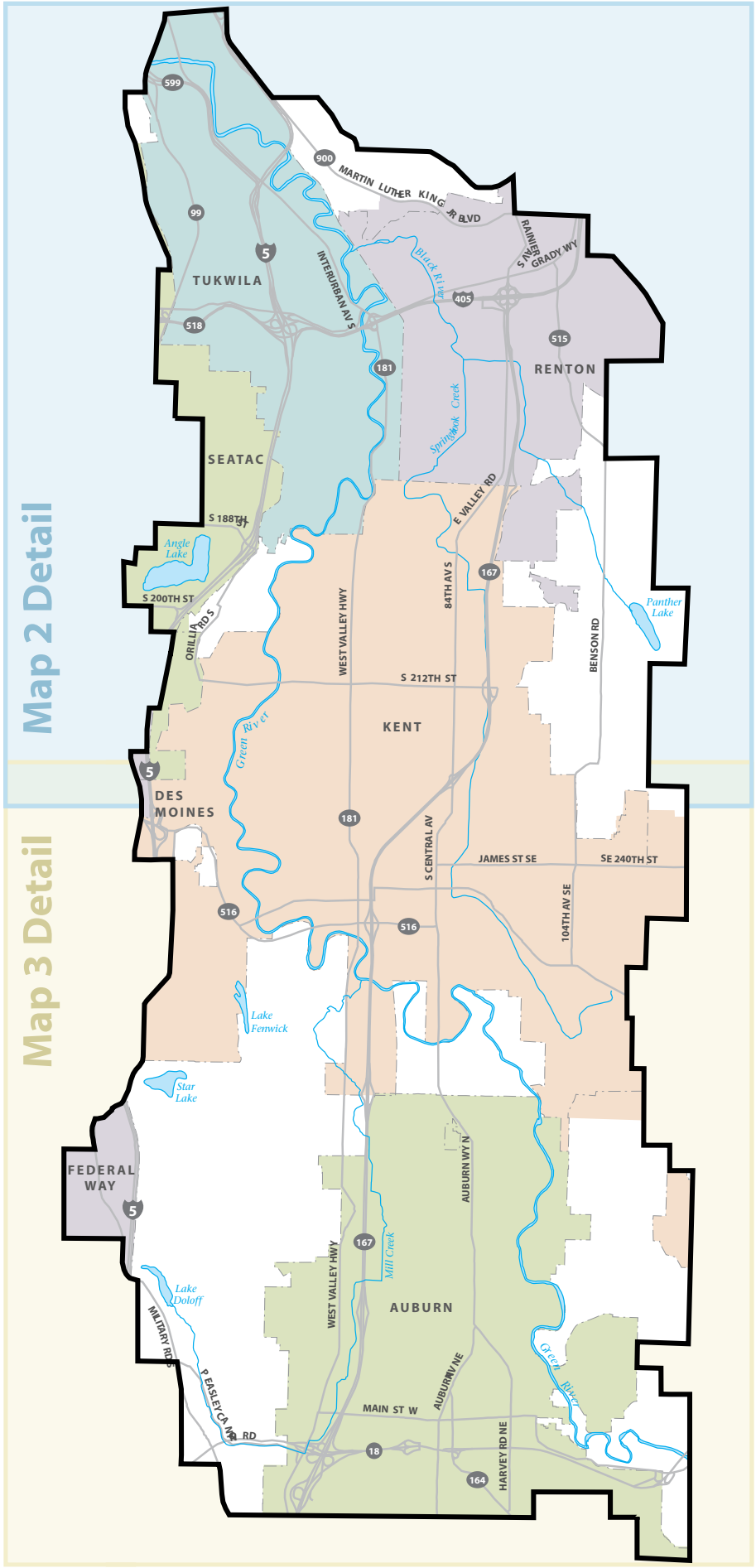
King County
 Department of Natural Resources and Parks
 Water and Land Resources Division
Flood Hazard Reduction Services Section

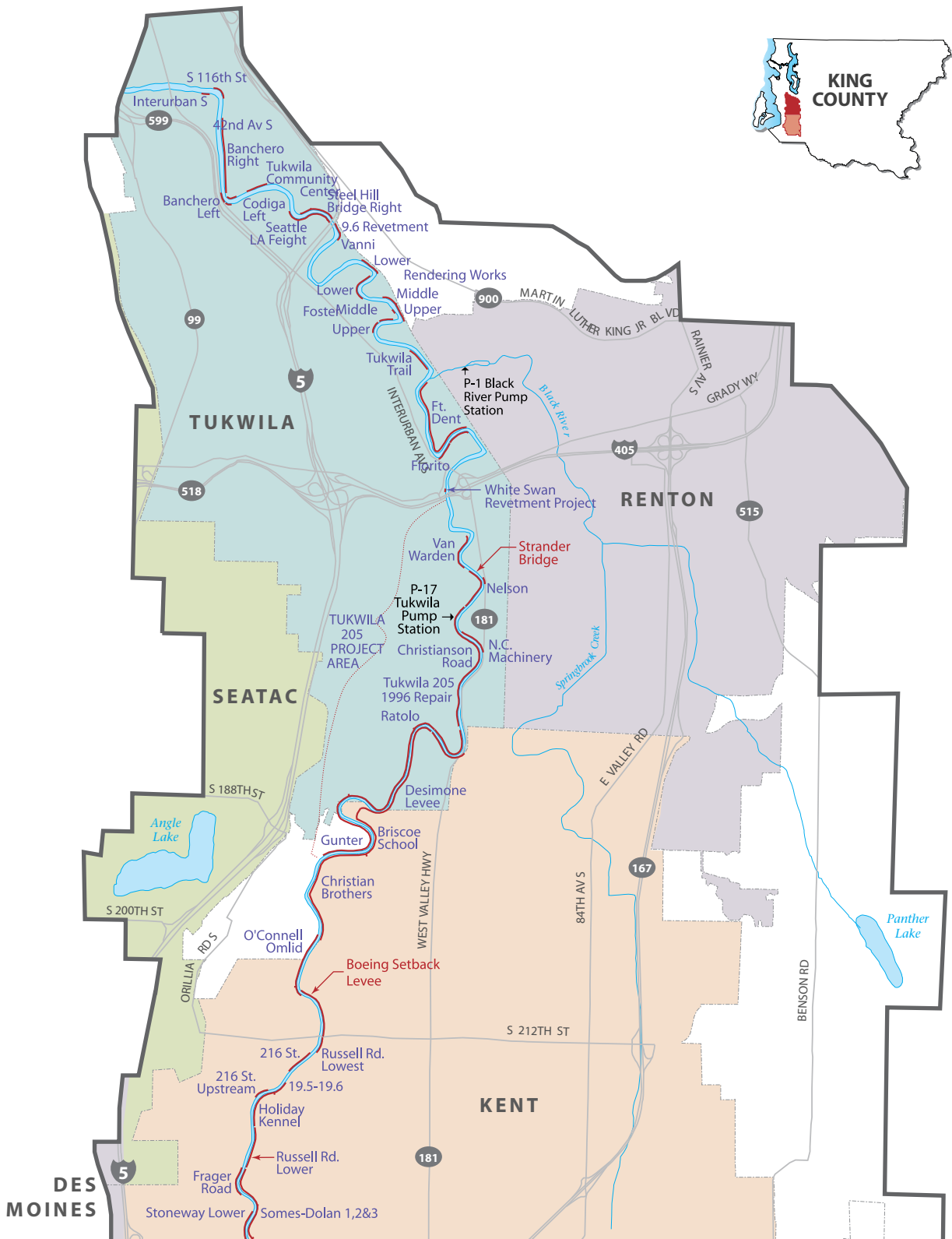
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Map 2 Detail

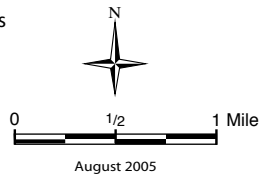
Map 3 Detail





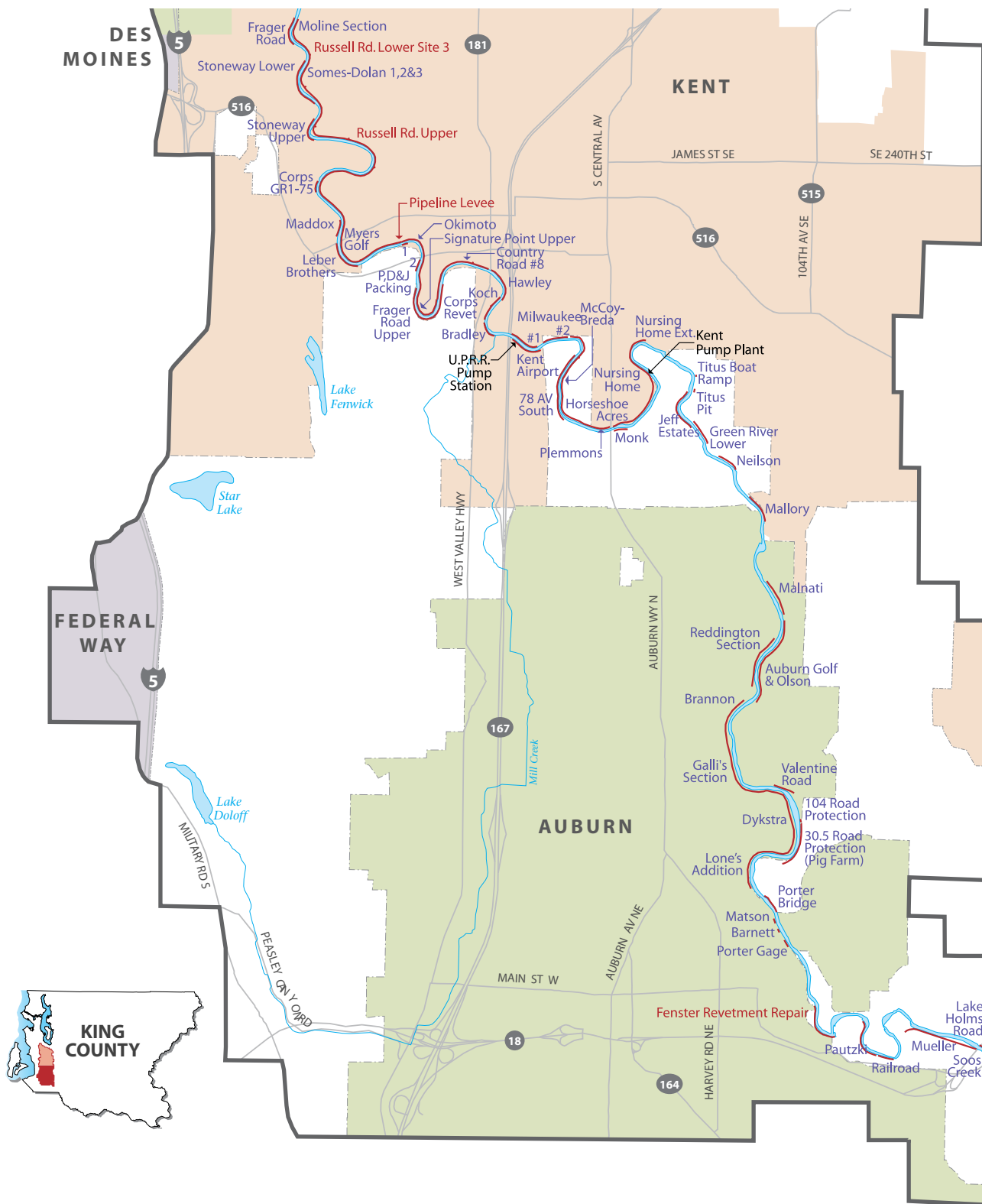
Map 2
GREEN RIVER FLOOD CONTROL ZONE DISTRICT North Portion

- Legend:**
- Name: 2004 Constructed Projects
 - Levee/Revetment
 - Lake/River
 - Stream
 - Major Road



King County
 Department of Natural Resources and Parks
 Water and Land Resources Division
Flood Hazard Reduction Services Section

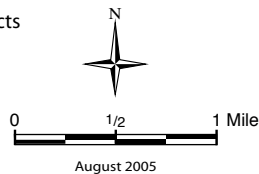
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Map 3

GREEN RIVER FLOOD CONTROL ZONE DISTRICT South Portion

- Name
- 2004 Constructed Projects
- Levee/Revetment
- Lake/River
- Stream
- Major Road



King County

Department of Natural Resources and Parks
 Water and Land Resources Division

Flood Hazard Reduction Services Section

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2004 ACCOMPLISHMENTS

Green River Flood Control Zone District work program and project accomplishments in 2004 included the following activities:

- Constructed the Fenster Revetment Repair project to structurally stabilize 280 linear feet of the 1,900 foot long revetment which was damaged by erosive floodwaters and removal of a culvert that posed a fish passage barrier during low and moderate river stages. Blocked juvenile salmonid access to Pautzke Slough, which now provides abundant salmonid flood refuge and over-wintering habitat. The project goals are to protect adjacent public and private infrastructure from flooding and continued damage to the revetment, and to improve mainstem and off-channel habitats for salmon recovery. The Fenster Revetment Repair project, located on the left bank of the Green River at river mile 32.0, is one of seven proposed levee and revetment projects identified in the Lower Green River Biological Assessment. The total cost of this project was \$196,023.
- Completed annual Green River Flood Control Zone District flood protection facility maintenance assessments. Included periodic inspections of the Section 205 Tukwila and Horseshoe Bend projects of the U.S. Army Corps of Engineers' Section 205 Program for preparation of the Annual Reports that are required by the Corps.
- Conducted vegetation management at the Tukwila and Horseshoe Bend Section 205 flood protection facility sites to maintain their eligibility for the U.S. Army Corps of Engineers' PL84-99 emergency repair cost sharing program.
- Provided ongoing daily operations and maintenance at the Black River (P-1), Tukwila (P-17) and Segale Pump Stations. Tracked results of smolt counter at the Black River Pump Station in cooperation with the cities of Kent and Renton, and the Muckleshoot Indian Tribe.
- Continued the implementation of the monitoring and assessment program for completed and proposed major maintenance projects as required by local, State and Federal permits. The monitoring program provides essential baseline and post-construction data for project performance analysis and fish habitat utilization at project sites.
- Responded to inquiries and provided technical support to the Green River cities on development proposals for consistency with the Pump Operations Procedures Plan.
- Developed, monitored, and tracked the budget and work program for the Green River Flood Control Zone District including the final accounting for the 3rd Avenue South Pump Station Outfall project completed in 2003 for the City of Kent.
- Coordinated and staffed the Green River Flood Control Zone District's Technical Committee and Executive Committee meetings including the preparation of the 2003 Annual Report. Included the development of Executive Committee Operating Rules and Procedures, and Land Acquisition Policy Guidelines.
- Provided technical assistance to WRIA 9 committees on salmon conservation planning efforts and projects, and provided representation on Green River floodplain management issues in these processes. Includes continued participation and coordination of project development and design with the U.S. Army Corps of Engineers' on the Green-Duwamish Ecosystem Restoration Project to the extent that such projects involve or affect any of the Green River Flood Control Zone District's flood protection facilities.

- Staffed flood patrols in the lower Green River basin consistent with King County's flood warning procedures, and completed river facility damage assessments as needed during and after flood events. Includes the enhanced coordination with the Green River cities and the U.S. Army Corps of Engineers on Howard Hanson Dam operations; organization of the annual Interagency Flood Preparedness meeting for the Green River; and implementation of the Flood Response Manual and Post-Flood Recovery Plan.





2004 BUDGET

AUTHORIZED 2004 BUDGET

The 2004 Green River Flood Control Zone District budget was approved in Resolution No. GR 31, adopted unanimously by the King County Council on November 24, 2003. Consistent with Chapter 86.15.050 RCW, the King County Council serves as the Board of Supervisors for the Green River Flood Control Zone District.

The District's authorized budget was based on the Executive Committee's majority recommendation adopted at their September 29, 2003 meeting based on anticipated revenues consisting of \$878,618 in estimated District property tax levy collections; \$140,000 in projected federal and state assistance and grants; and \$73,369 from interest income and the District's anticipated undesignated fund balance for a total anticipated revenue of \$1,091,987.

The District's total spending authority in 2004 was \$1,091,987 including a \$50,300 set aside for the contribution to the District's designated fund balance. Consistent with the requirements of RCW 86.15.140, the District's budget was structured into the following categories:

2004 Budget By Program Category

District Administration and Management	\$352,762
District Maintenance:	
• Major River Facility Repair Projects	\$369,713
• Pump Station Operation, Maintenance & Capital Improvements	\$201,848
• Annual Routine Maintenance & Repair Projects	\$89,716
• Project Performance Monitoring & Assessments	\$27,648
Total District Maintenance	\$688,925
Contribution to Designated Fund Balance:	
• Local Flood Match Funds	\$11,000
• Pump Station Equipment Repair/Replacement	\$39,300
Total Designated Fund Balance	\$50,300
2004 Approved Budget:	\$1,091,987

Ad Valorem Tax Levy

The District is primarily funded by an ad valorem tax levy on all taxable properties within its boundaries. The District certified levy rate by the King County Assessor in 2004 was 0.04669 cents per \$1,000 of assessed valuation. Therefore, for example, the owner of a King County-median priced \$303,500 home in the District paid approximately \$14.17 to the District levy, a decrease in the levy rate for the fifth consecutive year since 2000. The District's levy rate will continue to decrease on an annual basis as a result of the 1% maximum increase limitations established under Initiative 747 while the assessed valuation of properties in the District appreciate in value at a rate greater than 1%. New construction and increases in utility values also affect the District's

overall levy rate and provide a source of addition revenue beyond the 1% in existing assessed property valuations. The increase in the 2004 levy was held to the limitations of the maximum 1% increase established under Initiative 747 and within the Implicit Price Deflator (IPD) levels as established by Referendum 47, which for 2004 the IPD was 1.84%.

The District's 2004 net property tax levy collections totaled \$870,471. The difference between the projected tax levy collections of \$878,618 and the actual net property tax levy collections is due to several factors that affect general property tax collections (e.g., of delinquent payments from previous years, new construction, and tax refunds).

Tax Levy Collection by Jurisdiction

Based on the King County Assessor's 2004 Annual Report, the total assessed valuation of properties in the District equals \$18,783,764,800. This is comprised of \$15,747,079,606 of assessed valuation within the incorporated cities and \$3,036,685,194 of assessed valuation within unincorporated King County. Based on the District's 2004 net property tax levy collections of \$870,471 the approximate tax levy collected in each jurisdiction is as follows:

City of Auburn Total Assessed Valuation = \$2,867,981,932 2004 Tax Levy = \$132,905	City of Renton Total Assessed Valuation = \$2,437,725,019 2004 Tax Levy = \$112,966
City of Des Moines Total Assessed Valuation = \$18,512,785 2004 Tax Levy = \$858	City of SeaTac Total Assessed Valuation = \$1,538, 658,961 2004 Tax Levy = \$71,303
City of Federal Way Total Assessed Valuation = \$225,656,409 2004 Tax Levy = \$10,457	City of Tukwila Total Assessed Valuation = \$2,789,537,248 2004 Tax Levy = \$129,270
City of Kent Total Assessed Valuation = \$5,869,007,251 2004 Tax Levy = \$271,975	Unincorporated King County Total Assessed Valuation = \$3,036,685,194 2004 Tax Levy = \$140,723

For a full accounting and description of the District's actual expenditures, revenues, and year-end 2004 fund balance total, see the 2004 Year-End Revenue and Expenditure Report and the 2004 Year-End Fund Balance sections of this report.



2004 MAJOR MAINTENANCE PROJECTS

Fenster Revetment Repair

River Mile: 32.0, Left Bank

City of Auburn and Uninc. King County

Cost: \$ 196,023



The GRFCZD partnered with the City of Auburn to both stabilize a steep, eroding section of the Fenster Revetment and also to restore a blocked side channel connection between Pautzke Slough and the Green River at Fenster Park.



Access to Pautzke Slough was created by excavating the damaged Fenster Revetment.



A failing culvert was removed to open up high quality flood refuge and rearing habitat for salmon in Pautzke Slough.

The Fenster Revetment Repair project is located approximately one river mile downstream from Auburn Narrows Park, on the left bank of the Green River near River Mile 32.0, in both the City of Auburn and unincorporated King County. The project was designed and constructed by King County between mid-August and early October of 2004, following local, state and federal permit approvals. The total construction cost was \$196,023.

The project included removal of a hung and partially crushed culvert that for several decades had blocked fish passage and water flow between the Green River and Pautzke Slough during low and moderate flow conditions; removal of a 280 linear foot segment of the Fenster Revetment; and replacement of the existing revetment fill with a complex matrix of buried anchor rocks, large woody debris, soils and native riparian vegetation.

The project goals were to:

1. stabilize the eroding revetment;
2. rectify a fish passage barrier near the upstream end of the Fenster Revetment;
3. reconnect the mainstem Green River to Pautzke Slough, which provides salmonid flood refuge and over-wintering habitat; and
4. increase escape cover and hydraulic complexity along the left bank of the Green River at this location by installing habitat logs and native riparian vegetation.

Following placement of temporary erosion and sediment control measures and creation of a construction ramp for heavy equipment access, a temporary floating log boom of native coniferous logs with intact rootwads was placed in the river along the full length of the repair site. The logs were supplemented with brushy willow boughs, which, together with the logs, reduce near-bank water velocities, thereby reducing construction-caused turbidity during in-water construction.

The floating log boom was secured by chaining and shackling the logs to large quarry stones with pre-drilled holes, to accommodate the chains. Non-galvanized marine chain was used to avoid any potential impacts of the chain on water chemistry. The log boom was initially placed as an instream flow deflector for turbidity control

during instream construction. Then the logs were pulled in along the bankline, and secured by repositioning the quarry stones in holes excavated at the toe of the bank, and then installing the logs permanently along the bankline to enhance instream habitat. The remaining voids in the excavated anchor rock holes were then filled with gravel that simulated the range of particle sizes present in nearby gravel bars.

Following construction of the buried toe buttress and placement of the large woody debris as described above, a segment of the facility containing the damaged culvert was removed, and the bulk of the remaining revetment fill was excavated to restore the historic mouth of Pautzke Slough. A log-reinforced bed was constructed to recreate the historic slough mouth, using buried four to six foot diameter quarry stones to anchor the logs in place. This anchoring scheme was necessitated by the fact that the river channel forms a 90 degree bend at mouth of the slough, exposing it to very strong hydraulic forces during floods. Live willow stakes were planted on the bed at mouth of the slough, and additional layers of willow cuttings, supplemented with containerized native shrubs and trees, were placed in soil lifts along the banks of the newly formed swale draining the slough. The planting layers in this portion of the site were also alternated with lifts of biodegradable coir geotextile-wrapped fill for erosion protection.

Following toe stabilization, the construction bench was rebuilt to incorporate two layers of live willow cuttings, supplemented with containerized native trees and shrubs. The planting layers were alternated with lifts of selected fill materials, each of which was wrapped with biodegradable coir (coconut fiber) geotextile fabric for erosion protection. Finally, two feet of planting soils were placed along the full length of the bench to facilitate future site revegetation during the late fall and winter of 2004-2005.

After construction, all remaining disturbed soil surfaces along the bench were covered with biodegradable coir fabric for erosion control, and the entire site was stabilized by hydroseeding. During the subsequent dormant season, additional native riparian shrubs and trees were planted on the upper bank and in the riparian zone landward from the top of the bank. The site will be monitored in perpetuity for structural stability following floods and for plant growth and survival, and fish habitat utilization for five years following construction, in accordance with permit-driven monitoring requirements.

This project also served as a habitat mitigation project, funded in part by a \$25,000 contribution by the City of Auburn, as a requirement of a Washington Department of Fish and Wildlife (WDFW) hydraulic project approval (HPA) issued in 1998 for the City's waterline crossing of the Green River near Brannon Park at RM 29.54.



The restored channel was stabilized with large woody debris and native plantings.



Flood refuge was fully restored in the new channel connections.



Logs were anchored along the river's edge to stabilize the new revetment construction.

This project is fully consistent with Chinook salmon recovery actions prescribed by the WRIA 9 Technical Committee and set forth in the WRIA 9 Near Term Action Agenda, which calls for:

1. improving mainstem and off-channel habitats to increase juvenile rearing, life-stage diversity and productivity by improving connections between the mainstem and off-channel habitat to increase fry-to-fingerling survival rates;
2. reestablishing connections between the river and the adjacent floodplain and historical side channel habitats; and
3. setting back the revetment structure in the Fenster reach of the Green River.



The row of log deflectors is intended to function both for slope stability and low velocity salmon habitat.



The new revetment slopes are stabilized with rows of native trees and shrubs.



Flood waters cover the completed project site.



The log deflectors slow down high velocity waters during last winter's flood conditions.

MAJOR MAINTENANCE HISTORY SINCE 1991

The completion of the Fenster Revetment Repair project represents the 43rd major maintenance and repair project completed by the Green River Flood Control Zone District since 1991. Projects completed by the District have included a variety of designs such as in-water bank stabilization repairs, additions of large woody debris, out-of-water levee setbacks and lay-backs, and facility retrofits.

The total cost to complete the 43 projects was \$9,631,813. The District successfully leveraged \$6,061,546 – or 63% – in Federal, State and/or local disaster relief and grant funds to support the costs to complete these projects. Therefore, the cost to the District to complete these projects was \$3,570,267 – or 37%.

The following table lists the project name, construction year, river bank and river mile, total project costs, the District's share of the project costs, and the amount of non-District funds for the 43 completed projects:

Project Name	Year	River Mile	Total Costs	GRFCZD Costs	Federal, State, Other
78th Avenue South	1991	25.5	\$9,828	\$3,188	\$6,640
Boeing (RM 18.74)	1991	18.74	\$165,000	\$20,625	\$144,375
NC Machinery/Liston	1991	14.7	\$22,760	\$2,845	\$19,915
Nursing Home	1991	26.6	\$23,373	\$13,607	\$9,766
Segale Landward	1991	15.5	\$125,000	\$62,500	\$62,500
Christiansen Trail	1992	13.5	\$52,449	\$23,602	\$28,847
Lone's 3rd Addition	1992	30.8	\$55,238	\$6,905	\$48,333
Brannon	1993	30.3	\$5,894	\$5,894	\$0
Okimoto	1993	23.3	\$136,145	\$0	\$136,145
Dykstra/Lone's Addition	1994	30.7	\$130,039	\$32,510	\$97,529
Plemmons U/S	1994	25.4	\$82,507	\$20,627	\$61,880
Segale Riverward Levee	1995	15.5	\$741,635	\$185,409	\$556,226
42nd Avenue South	1996	7.6	\$466,001	\$129,478	\$336,523
Boeing (RM 17.80)	1996	17.8	\$115,872	\$14,484	\$101,388
Home Depot (Tuk. 205)	1996	14.42	\$242,435	\$27,435	\$215,000
McCoy Breda	1996	24.7	\$373,820	\$80,000	\$293,820
Nursing Home	1996	25.7	\$83,502	\$22,972	\$60,530
Plemmons	1996	25.3	\$81,532	\$20,383	\$61,149
Segale Landward Levee	1996	15.5	\$426,689	\$53,336	\$373,353
Signature Point Lower	1996	22.3	\$174,661	\$25,060	\$149,601



Continued from page 15

Project Name	Year	River Mile	Total Costs	GRFCZD Costs	Federal, State, Other
Russell Road Lowest	1997	18.1	\$213,386	\$28,068	\$185,318
Segale Landward Levee	1997	15.5	\$1,186,614	\$148,327	\$1,038,287
Signature Point Upper	1997	22.3	\$332,127	\$51,648	\$280,479
Strander Bridge Tree	1997	13.2	\$10,549	\$0	\$10,549
Boeing (RM 17.62)	1998	17.62	\$104,946	\$38,748	\$66,198
Christian Brothers	1998	17.15	\$247,846	\$40,601	\$207,245
Desimone (Tukwila 205)	1998	15.45	\$442,435	\$48,935	\$393,500
Russell Road Lower	1998	19.1	\$273,653	\$41,965	\$231,688
Russell Road Upper	1998	20.4	\$236,572	\$35,705	\$200,867
Christian Bros.-LWD Adj.	1999	17.15	\$15,341	\$0	\$15,341
Desimone	1999	14.45	\$309,608	\$136,684	\$172,924
Narita	1999	22	\$150,539	\$80,121	\$70,418
Pipeline	1999	22	\$354,922	\$248,384	\$106,538
Russell Rd. Low.-LWD Adj.	1999	19.1	\$20,660	\$20,660	\$0
Russell Rd. Up.-LWD Adj.	1999	20.4	\$12,513	\$0	\$12,513
Boeing Setback Levee	2000	17.5	\$534,459	\$395,405	\$139,054
White Swan/ Southcenter Tr.	2001	12.42	\$48,152	\$8,176	\$39,976
Desimone Levee - Toe	2002	15.4	\$562,957	\$498,957	\$64,000
Pipeline Levee - Toe	2002	22.0	\$219,953	\$219,953	\$0
3rd Avenue South Outfall	2003	24.4	\$33,745	\$614	\$33,131
Narita Levee - Toe	2003	21.15	\$403,016	\$403,016	\$0
Segale Levee - Toe	2003	15.4	\$207,416	\$202,416	\$5,000
Fenster Revetment	2004	32.2	\$196,023	\$171,023	\$25,000
Total Cost:			\$9,631,813	\$3,570,267	\$6,061,546

2004 YEAR-END REVENUE AND EXPENDITURE REPORT

YEAR END 2003 FUND BALANCE

The District's 2003 fund started with a total fund balance as of December 31, 2003 of \$599,158 as reported in the District's 2003 Annual Report. Of this amount, \$597,230 was set-aside in a designated fund balance allotment. Of this, \$466,623 is allocated for pump station repairs and equipment replacement. The balance of \$130,607 is a source of matching funds to leverage potential future state and federal assistance for flood damage repairs. The remaining \$1,928 of fund balance is undesignated.

ACTUAL 2004 REVENUE

The District's actual cash revenue in 2004 totaled \$892,833. This was comprised of \$870,471 in net levy revenues; \$20,642 in interest income from the designated and undesignated fund balance; and \$1,720 in leasehold excise tax revenues.

Sources of Revenue	Amount
2004 Actual Net Levy Revenues:	\$870,471
Interest Income from Designated and Undesignated Fund Balance:	\$20,642
Leasehold Excise Tax Revenues:	\$1,720
Total:	\$ 892,833

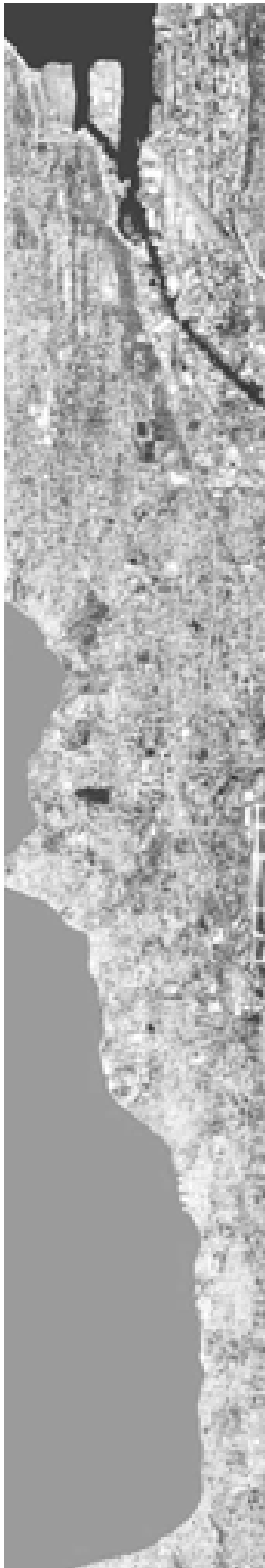
ACTUAL 2004 EXPENDITURES

The combined District administration and maintenance expenditures during 2004 totaled \$718,023. These expenditures and charges are divided into two separate budget categories: (1) management and administration of the Green River Flood Control Zone District; and

(2) maintenance, which includes pump station operations and maintenance, major river facility repairs, annual facility maintenance & vegetation management, and project performance monitoring. These expenditures are exclusive of the \$50,300 set aside for the for the designated fund balance contribution.

During 2004, \$213,511 was spent on management and administration activities and \$504,512 on the repair, maintenance and operations programs. These actual expenditures are further detailed on the next page:





Administration and Management	
• Program/District Management Labor Costs:	\$152,667
• Indirect/Overhead Assessment (Net):	<u>\$60,844</u>
Administration and Management Sub-total =	\$213,511
Maintenance and Operations	
• Pump Station Operation and Maintenance:	\$184,135
• Major River Facility Repair Projects:	\$196,023
• Facility Maintenance & Vegetation Management:	\$111,923
• Project Performance Monitoring and Assessment:	<u>\$12,431</u>
Maintenance and Operations Sub-total =	\$504,512
Grand Total:	\$718,023

DISTRICT ADMINISTRATION AND MANAGEMENT

District administrative and management expenditures in 2004 supported a combination of 1.5 full-time staff positions in addition to ecological, annual maintenance and monitoring staff. In addition, the administration and management budget provided support to all District activities including:

- coordination of maintenance related work for various projects (e.g., site investigations, survey, engineering design, permit applications and coordination, oversight of construction crews and equipment, overall project management);
- implementation of the 2002 Interlocal Agreement for the Management and Administration of the Green River Flood Control Zone District between King County and the Cities of Auburn, Tukwila, Renton and Kent;
- annual budget development, analysis and monitoring;
- preparation of annual resolutions, financial plan and fiscal note for the District's Board of Supervisors and levy certification for King County's Department of Assessments;
- technical assistance to lower Green River Valley cities and other resource agencies such as the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, and the U.S. Geological Survey;
- preparation of District's 2003 Annual Report;
- participation and coordination with other Green-Duwamish (WRIA 9) Watershed activities; and
- ongoing coordination and staffing of the District's Technical and Executive Committee meetings.

Administrative and Management Expenditures

Labor (Salary, Benefits, Insurance, Social Security):	\$149,009
Materials, Office Supplies, Printing, Training:	\$3,658
King County Overhead Charges (Net):	\$60,844
Total:	\$213,511

DISTRICT MAINTENANCE

The District's maintenance budget includes all costs for the maintenance and operations of the Black River (P-1), Tukwila (P-17) and Southcenter/Segale pump stations; major river facility repairs and projects; and the annual maintenance and vegetation management program. Also, because of the direct association to the District's major maintenance programs and projects, the expenditures for project monitoring and assessment are also included in the District's Maintenance category.

Summary of District Maintenance Expenditures

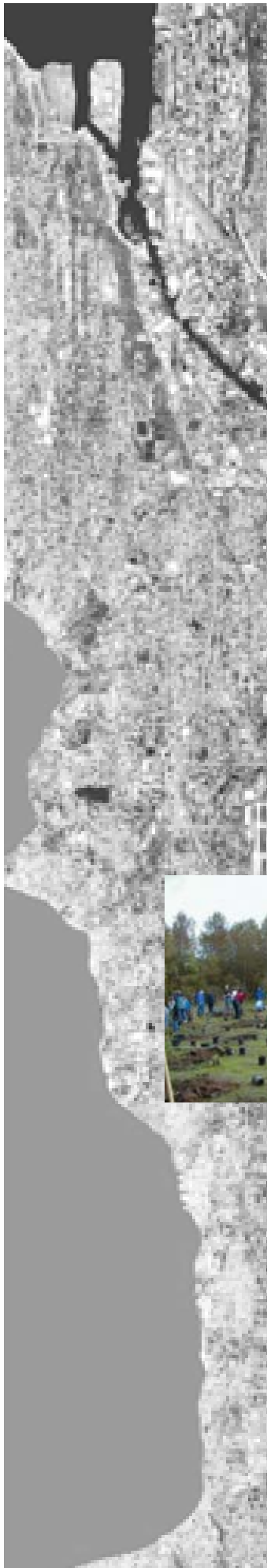
Pump Station Operation and Maintenance:	\$184,135
Major River Facility Repair Projects:	\$196,023
Facility Maintenance & Vegetation Management:	\$111,923
Project Monitoring and Assessment:	\$12,431
Total:	\$504,512

Pump Station Operations and Maintenance

The pump station expenditures in 2004 includes one full-time pump station operator to oversee all the operations and maintenance of the Black River, Tukwila and Southcenter/Segale pump stations. In addition to the routine operations and maintenance, the pump station operator carries out many other activities, including:

- overseeing the seasonal in-migration of salmonids, and resident cutthroat trout and steelhead normally between mid-September and January 31st;
- overseeing the seasonal downstream out-migration passage from early April to mid-June of salmonids, resident cutthroat trout and steelhead;
- coordination of fish migration data with the Cities of Renton and Kent, and the Muckleshoot Indian Tribe;
- grounds and property maintenance including the removal of trash and debris that collects in the forebay of the Black River pump station on a continuing basis; and
- coordination of annual inspections with the City of Renton's Fire Prevention Bureau and the Occupational Safety and Hazard Administration (OSHA) inspections at the Black River pump station.





Pump Station Operations and Maintenance Expenditures

Labor:	\$95,695
Utilities – Electricity, Natural Gas, Water, Diesel:	\$73,530
Maintenance Services:	\$8,881
King County & Rental Vehicle:	\$4,800
Materials and Supplies:	\$1,229
Total:	\$184,135

Major River Facility Repair Projects

For the District's major facility repair maintenance projects, the expenditures include all labor and the associated benefits and overhead charges, materials, supplies and equipment for the completion of the Fenster Revetment Repair project (see pages 12–14 for more detailed information on the project).

Major River Facility Repair Project Expenditures

Labor:	\$100,326
Materials, Supplies, Debris Disposal, Permits:	\$47,068
King County Equipment:	\$23,759
Contract Services (e.g., Rental Equipment):	\$17,749
Permits (King County and City of Auburn):	\$7,121
Total:	\$196,023



Volunteers replant floodplain areas at the project site.

Annual Maintenance & Vegetation Management Program

The District's annual maintenance and vegetation management program includes non-native vegetation removal and mowing of District facilities including the Tukwila and Horseshoe Bend Section 205 projects as required under the U.S. Army Corps of Engineers' Section 205 Program; noxious weed removal as required to carry out the mandates of state weed control law under Chapter 17.10 RCW; maintenance of access roads to the District's facilities; interpretive sign placement; small repairs and maintenance projects to flap gates and culverts; and watering of native vegetation planted following prior years' major maintenance projects.

Annual Maintenance & Vegetation Management Program Expenditures

Labor:	\$84,632
Contract Services (e.g., Rental Equipment):	\$15,182
Materials, Supplies, Permits:	\$7,464
King County Equipment:	\$4,645
Total:	\$111,923

Project Monitoring & Assessment Program

The District's 2004 maintenance expenditures also include the costs for the project monitoring and assessment program for proposed and completed major maintenance projects to monitor structural stability, plant growth and survival, and fish habitat assessment and utilization. This program provides baseline and post-construction data for project performance analysis and fish habitat utilization at project sites so that the District can continue to adequately provide flood protection and further enhance the natural health of the Green River and its tributaries.

The project monitoring and assessment program is being carried out to comply with:

1. the statutory requirements set forth in local, State and Federal permits, specifically the Washington State Hydrologic Project Approval; and
2. the listing of Puget Sound Chinook by the National Marine Fisheries Service in March 1999 and the listing of bull trout by the U.S. Fish and Wildlife Service in April 2001, as threatened species.

Data collected at previously constructed District projects will be used to demonstrate utilization by salmonids at these sites and for assisting in the design of future major river repair projects along the lower Green River.

Project Monitoring & Assessment Program Expenditures

Labor:	\$12,132
King County Equipment:	\$299
Total:	\$12,431





2004 YEAR-END DISTRICT FUND BALANCE

The District's fund began the 2004 year with \$599,158 in total designated and undesignated fund balance as reported in the District's 2003 Annual Report. During 2004, the District's fund realized a total of \$892,833 in credits and \$718,023 in debits. Therefore, the 2004 fund balance realized a net increase in the amount of \$174,810.

The following table illustrates the activity to the District's fund in 2004.

2004 District Fund Activity

2003 Year End Fund Balance:	\$599,158
2004 Actual Net Levy Revenues:	\$870,471
Interest Income:	\$20,642
Leasehold Excise Tax Revenues:	\$1,720
Total Of 2004 District Expenditures:	<u>\$(718,023)</u>
2004 Year-End Fund Balance:	\$773,968
Net <u>Increase</u> To Fund Balance:	\$174,810

Designated Fund Balance

On July 19, 1993 the Green River Flood Control Zone District's Board of Supervisors passed Resolution No. GR1993-2 to set aside, or "designate," an initial amount of \$94,230 from the District's undesignated fund balance for two specific purposes:

1. future use as local match for federal and state disaster assistance funding and grants following Presidential-declared flood disaster events; and
2. repair, replacement and upgrades of equipment at the Green River pump stations.

Resolution No. GR1993-2 also established a process whereby \$50,300 in District funds are set aside annually: \$11,000 for local flood match and \$39,300 for pump station equipment repair, replacement and upgrades. These designations were consistent with the recommendation approved by the Green River Basin Executive Committee on November 19, 1992 and are target figures based on annual District tax revenue collections.

Local flood match and pump station repair designations to date total \$141,607 and \$505,923, respectively, for a combined total of \$647,530 which includes the 2004 contributions. These designations are consistent with the Green River Basin Executive Committee and Basin Technical Committee recommendations in 1992.

The following table demonstrates the designated fund balance activity since its inception in 1993:

Designated Fund Balance Activity

Year(S)	Flood Match	Equipment	Total	Cumulative Total
1993	\$20,607	\$73,623	\$94,230	\$94,230
1994-2003	\$110,000	\$393,000	\$503,000	\$597,230
2004	<u>\$11,000</u>	<u>\$39,300</u>	<u>\$50,300</u>	\$647,530
Total	\$141,607	\$505,923	\$647,530	

Undesignated Fund Balance

Additional District fund balance revenues beyond the \$50,300 designated on an annual basis are to be used to supplement Green River maintenance activities. These funds and additional income such as that from interest, grant revenue or property sales are set aside in the undesignated fund balance for future District needs. As of December 31, 2004 a total of \$126,438 was set aside in the undesignated fund balance.

Because of the outstanding maintenance needs in the District, the undesignated fund balance – as well as the designated fund balance for local flood match – provide an important means of supplementing the District’s limited ability to complete necessary repair projects using only the annual levy revenues. With the limits in federal and state funds available for major river facility repair projects, the fund balance enables the District to continue to address existing, unrepaired facility damages. The fund balance also provides additional flexibility to respond to future flood events and new programs and requirements imposed upon the District’s work program.

As shown in the table below, the District’s total designated and undesignated fund balance at the end of 2004, is \$773,968. As stated above, \$647,530 of this total has been designated for local flood match and pump station purposes since 1993. This leaves the balance of \$126,438 as undesignated fund balance.

2004 Fund Balance Summary

Designated Fund Balance As Of 12/31/04:	
• Local Flood Match Funds	\$141,607
• Pump Station Equipment Funds	\$505,923
Undesignated Fund Balance As Of 12/31/04:	<u>\$126,438</u>
Total Fund Balance as of 12/31/04:	\$773,968





2005 BUDGET

The 2005 Green River Flood Control Zone District budget was approved by the District's Board of Supervisors on November 22, 2004 by Resolution No. GR 33. The certified levy rate by King County's Assessors Office for 2005 is 0.4658 cents per \$1,000 of assessed value; the owner of a King County-median priced home (2004) assessed at \$303,500 will pay approximately \$14.14 to the District levy in 2005. The 2005 levy is an estimated annual reduction of \$0.03 per year from 2003 and a total annual reduction of \$1.13 from the 2000 levy. Based on this levy rate and the Department of Assessment's 2005 assessed valuations, 2005 collections are expected to total \$901,356.

The District's budget authorized by Resolution No. GR 33 specifies how projected revenue from the District levy will be disbursed. Consistent with the requirements of RCW 86.15.140, the District's budget is categorized as follows:

2005 Budget

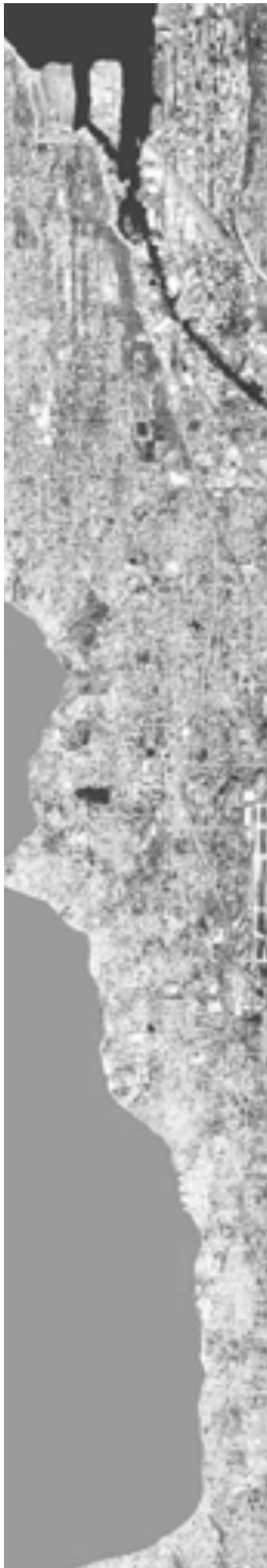
District Administration and Management:	\$203,759
District Maintenance:	
• Major River Facility Repair Projects	\$510,712
• Pump Station Operation, Maintenance & Capital Improvements	\$210,092
• Annual Routine Maintenance & Repair Projects	\$89,671
• Project Performance Monitoring & Assessments	\$24,854
Contribution to Designated Fund Balance:	
• Local Flood Match Funds	\$11,000
• Pump Station Equipment Repair/Replacement	<u>\$39,300</u>
2005 Total Approved Budget	\$1,089,388

2005 GOALS

The 2005 goals for the Green River Flood Control Zone District include the following:

- Coordinate district activities, including staffing of Executive and Technical Committees; preparation of flood damage repair project reimbursement documentation, annual budgets, work programs, annual reports, and requested work products for review and approval by the Green River cities as provided for in the District's Interlocal Agreement; and completion of the 2004 Annual Report.
- Continue risk-based flood damage analysis and assessment to more accurately determine facilities susceptible to potential flood-related damage and failure including expected average annual avoided damage. Use risk analyses to prioritize future levee maintenance projects.
- Evaluate the district's capability to fund repairs to critical flood control facilities through grants and other means of revenue enhancements available to the district.
- Continue to implement the Lower Green River Flood Response Manual and the Post-Flood Recovery Plan for the Lower Green River Basin to provide coordinated interjurisdictional flood response programs and activities between King County and the Green River cities to prepare for and respond to future flood events.
- Work with the United States Army Corps of Engineers on operations of Howard Hanson Dam to coordinate and improve the level of downstream flood protection and limit the impacts on district-maintained flood protection facilities. Coordinate district programs with other United States Army Corps of Engineers funding and regulatory authorities such as the Green River Ecosystem Restoration Project, Emergency Flood Repair Program, and Section 404 of the Clean Water Act.
- Work with the Green River Watershed Steering Committee and Watershed Forum and other agencies in the Green/Duamish Water Resource Inventory Area on salmon recovery plans and programs relating to the survival of native salmonid species and the restoration of salmonid and riparian habitat in response to Endangered Species Act requirements within the District's jurisdiction.
- Manage, monitor and meet contract requirements of grant awards for river maintenance projects and other activities, and pursue to the fullest extent practicable all federal, state and local funding opportunities, grants and disaster recovery assistance.
- Request federal and state financial assistance for Green River flood damage repair projects and levee improvements, and complete required documentation to secure reimbursement from these agencies.
- Respond to public inquiries and provide technical support to the Green River cities on development proposals that affect the Pump Operations Procedures Plan or the structural integrity and maintenance requirements of the district's flood protection facilities, and review and assess the current Pump Operations Procedures Plan and evaluate the need to update the Plan to address additional operational requirements that may result from any development proposal.
- Coordinate community involvement and participation in native tree and shrub planting at selected project sites. Promote public education and awareness of the district's goals and objectives for flood hazard reduction.





- Conduct 2005 spring and fall river maintenance assessments, prioritize flood damage repair projects, complete project designs and apply for needed permits for 2005 maintenance and repair projects. Coordinate repair projects through review and concurrence as required by the U.S. Army Corps of Engineers, the NOAA Fisheries, and the U.S. Fish and Wildlife Service to meet Endangered Species Act requirements.
- Complete annual reports for the Tukwila and Horseshoe Bend 205 Projects for the U.S. Army Corps of Engineers.
- Maintain and operate the Black River, Tukwila, and Segale/Southcenter Pump Stations to King County standards and the adopted Pump Operations Procedures Plan, including regular assessment of all pump station functions to ensure optimal and cost-efficient performance.
- In support of the district's designated fund balance for pump plant equipment repair/replacement, develop a pump plant replacement plan and amortization schedule to guide, if necessary, proposed major renovation and replacement of the equipment and/or seismic retrofitting of the fuel storage area at the Black River Pump Station to ensure consistency with contemporary standards and operating requirements.
- Estimate 2005 maintenance project costs and coordinate availability of equipment, supplies, materials, and King County department of transportation's roads services division maintenance crews as needed to construct the 2005 projects.
- Provide engineering and other technical assistance for federal and state financial assistance requests for Green River flood damage repair projects and levee improvements.
- Oversee management and construction of the District's 2005 flood control facility maintenance projects.
- Monitor and assess performance of completed maintenance projects in compliance with permit conditions and in conformance with the requirements of the Endangered Species Act and other federal, state and local permits.
- Operate pump stations in the event of a flood on the Green River, including enhanced communication with county personnel at the Flood Warning Center, flood patrols in the field, and with personnel at the Green River cities.
- Provide technical support to King County's Flood Hazard Reduction Services Section on its update to the county's comprehensive Flood Hazard Reduction Plan, implementation of King County's Community Rating System, development of a six-year Capital Improvement Plan, and other projects and programs as needed.

2004-2005 GREEN RIVER FLOOD CONTROL ZONE DISTRICT ROSTER

Executive Committee

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The Honorable Steven Mullet, Mayor

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The Honorable Julia Patterson, Councilmember District #13

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The Honorable Ron Sims, King County Executive

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The Honorable James White, Mayor

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2004-2005 GREEN RIVER FLOOD CONTROL ZONE DISTRICT ROSTER (continued)

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Mr. Tim Carlaw, Storm Drainage Engineer

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2004-2005 GREEN RIVER FLOOD CONTROL ZONE DISTRICT ROSTER (continued)

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